

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

MAR 24 1997

In the Matter of)
)
Usage of the Public Switched)
Network by Information Service)
and Internet Access Providers)

CC Docket No. 96-263

Comments of Hardy & Ellison, P. C.

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SUMMARY

For over twenty years, the Commission has allowed computer related enhanced services to develop without the restraints of regulation. FCC forbearance in this area has directly resulted in the robust development of Internet-based communications services that were unforeseen just a few years ago. That rich growth in communications in this country, and worldwide, can continue if the past prudent wait-and-see approach of the FCC is sustained.

Unfortunately, false alarms are being sounded. Internet usage is being cited by some as a freeloading drain on the PSTN. In fact, Internet usage has not caused widespread congestion on the PSTN, despite media and RBOC Reports to the contrary. Where isolated problems on the PSTN do exist, technological advances will remove much of the related burden. For example, ISDN and xSDL lines are becoming available and prices are dropping. Use of those new high speed lines, and increased use of wireless services, will greatly reduce demands on the PSTN in the future.

The Commission should not be distracted from past regulatory restraint to fix minor growth-related problems that will be solved by natural marketplace initiatives of Internet service companies and RBOCs alike. To do otherwise will put continued development of this already vital median in jeopardy without any real justification.

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I. INTRODUCTION

Hardy & Ellison, P.C. (H&E) is a communications law firm located in Burke, Virginia. It represents a number of companies that are involved in production and distribution of television programming; satellite television equipment sales and installation; and Internet related services. Hardy & Ellison respectfully submits these Comments on behalf of interested Internet Service Providers (ISPs) located in the Washington, DC metropolitan area, such as Monumental Network Systems, a Mid-Atlantic based ISP providing dialup and high speed digital access to consumers, businesses, and government agencies.

II. PAST REFUSALS TO REGULATE INTERNET SERVICE PROVIDERS WERE IN THE PUBLIC INTEREST

The Commission has consistently held that ISPs should not be hampered with regulatory restrictions. As early as 1970, in the Computer I Tentative Decision, the Commission decided not to regulate the rates, terms and conditions of data processing services under Title II of the Communications Act of 1934, as amended.¹ Soon thereafter, in the Computer II proceeding, the Commission established the distinction between basic and enhanced service providers (ESPs) to handle the explosion of computer related telecommunications services in the 1970's.² There the Commission determined that a hovering cloud of regulation would only serve to place artificial boundaries on the growing role of all ESPs,³ finding that ESPs should be limited "only by their entrepreneurial ingenuity and competitive market restraints."⁴

¹ Regulatory and Policy Problems Presented by the Interdependence of Computer Communications Services and Facilities, 28 F.C.C.2d 291 (1970) ("Computer I Tentative Decision").

² Amendment of Section 64.702 of the Commission's Rules and Regulations, 77 F.C.C.2d 384 (1980) ("Computer II Order"). Basic services were defined as "pure transmission capability over a communications path that is virtually transparent in terms of its interaction with customer supplied information." Enhanced services were defined as basic service in conjunction with "computer processing applications that act on the format, content, code, protocol or similar aspects of the subscriber's transmitted information, or provide the subscriber additional, different, or restructured information, or involve customer interaction with stored information."

³ Computer II Order, 77 F.C.C.2d at 428.

⁴ Computer II Order, 77 F.C.C.2d at 429.

Thereafter, the Commission classified ESPs as "end users" in its *Access Charge Reconsideration* proceeding.⁵ As a result, ISPs were again not regulated, under Title II, nor were they assessed usage sensitive access charges. The Commission noted that the difficulties of distinguishing between intrastate and interstate traffic made it troublesome to impose access charges on ESPs.⁶ The FCC also recognized that ESPs would experience "rate shock" with the imposition of higher fees; increases that would put their continued viability in question.⁷ Finally, the Commission noted that the imposition of access charges on ESPs would be discriminatory because other end users were not under the access charge regime.⁸ Since that time, the Commission has consistently refused to apply access charges to ESPs.⁹

⁵ MTS and WATS Market Structure, 93 F.C.C.2d 241 (1983) ("Access Charge Order"), *modified on reconsideration*, 97 F.C.C.2d 682 (1983) ("Access Charge Reconsideration Order"), *modified on further reconsideration*, 97 F.C.C.2d 384 (1984), *aff'd in part and remanded in part* Nat'l Ass'n of Regulatory Util. Comm'rs v. FCC, 737 F.2d 1095 (D.C. Cir. 1984), *cert. denied* 469 U.S. 1227 (1985), *modified on second further reconsideration* 101 F.C.C.2d 122 (1985), *aff'd sub nom. Am. Tel. & Tel. Co. v. FCC*, 832 F.2d 1285 (D.C. Cir. 1987).

⁶ Access Charge Reconsideration Order, 97 F.C.C. 2d at 711

⁷ *Id.* at 713-714.

⁸ See Amendments of Part 69 of the Commission's Rules Relating to the Creation of Access Charge Subelements for Open Network Architecture, 4 F.C.C.R. 3983, 3993, n.67 (1989).

⁹ See Amendments of Part 69 of the Commission's Rules Relating to Enhanced Service Providers, 3 F.C.C.R. 2631 (1988), Amendments of Part 69 of the Commission's Rules Relating to the Creation of Access Charge Subelements for Open Network Architecture, 6 F.C.C.R. 4525 (1991) and In the Matter of Access Charge Reform, NPRM, Third Report & Order and NOI, CC Docket 96-262 ¶ 283 (1996).

This lack of regulatory involvement paved the way for some amazing results. In 1981, the Internet was still primarily a research tool, used by academics and researchers to share data and computer resources. It was a network of fewer than 300 computers located, mostly at universities.¹⁰ After the World Wide Web was developed in the early 1990's, and the Internet became available to anyone with a computer that figure increased. By 1993, over one million computers were hooked up to the Internet and that number rose to 9.4 million as of June 1996.¹¹

The benefits of this unregulated growth are now obvious. Individuals have access to information never before available to the public at large.¹² Governments are able to make resources available on the Web to all who need it. Businesses are able to reach consumers worldwide, at an almost negligible cost. All of these developments are the result of unfettered market forces that continue to drive and shape the face of the Internet, in ways no one imagined when the Department of Defense created the framework for the Internet in the early 1960's.

¹⁰ ACLU v. Reno, Case Nos. 96-963, 96-1458, 1996 U.S. Dist. LEXIS 7919 (E.D. Pa., June 12, 1996), at 22-23.

¹¹ Id.

¹² A good example is the drive to place most of the Vatican's library on the World Wide Web. The Vatican library contains items whose age and condition rendered them unavailable to all but a small few, who could travel to Rome and gain permission to view the documents. Today, some of those works can be seen at the Vatican's Web Site at <<http://www.vatican.va>>

III. THE COMMISSION'S TENTATIVE CONCLUSION IN THIS PROCEEDING
THAT ISPs SHOULD NOT BE SUBJECTED TO INTERSTATE ACCESS CHARGES
IS WELL-PLACED

A. Internet Usage Is Not Causing Congestion on the PSTN

1. Media Hype About PSTN Congestion is Just That. . .Hype

According to recent media and telephone industry reports, the sudden surge of Internet users and the growth in the number of ISPs in the past two years has created a crisis on the public switched telephone network ("PSTN").¹³ The Bell Atlantic Report claims that the increased use of analog modems by Internet users is clogging the PSTN and forcing LECs to undergo costly service upgrades, in order to maintain network reliability. Recently, America On-Line's ("AOL") widely publicized troubles with network congestion and busy signals have added fuel to this fire.

Unfortunately, the media picked up on consumer inability to connect to AOL and confused AOL network busy signals with PSTN congestion. In fact, that congestion was

¹³ See e.g. Louis Trager, Internet Choking Phone Lines: Pac Bell Warns of Unmanageable "Data Tsumnai", S. F. Chron., Oct. 23, 1996 at D-1; Norm Alster, Who Pays for Net Access? Anyone With a Telephone, Inv. Bus. Daily, Nov. 20, 1996, at A8; Report of Bell Atlantic on Internet Traffic, (visited March 17, 1997) <<http://www.ba.com/ea/fcc/report.htm>>, ("BA Report" or "Bell Atlantic Report").

the result of lack of capacity on *AOL's own network*, not as a result in clogging of the PSTN.¹⁴ In reality, much of the congestion discussed in the media involves congestion on the Internet itself, not on the PSTN.¹⁵

Some aggressive ISP campaigns to sign up members created congestion symptoms similar to those of AOL. Numbers of customers are increasing faster than some ISPs can add capacity. WorldNet, AT&T's ISP, stopped signing up new customers because it was overloaded.¹⁶ Quite often, the ISPs lacked sufficient lines and modems to meet the demand for their services, resulting in busy signals when their customers tried to dial into their networks. With lack of sufficient hardware at ISP sites comes the perception of consumers that the PSTN is over crowded. However, this lack hardware and the busy signals it creates do not clog the PSTN, because they result *after* the PSTN has delivered the signal to the ISP.¹⁷ The PSTN is not overloaded, the modems at the consumer's ISP are and the market itself is acting to correct the problem.¹⁸

¹⁴ See, e.g. Kevin Maney, Web in Crisis? Gridlock on the Info Highway, USA Today, Jan. 20, 1997, at 1B; Louise Kehoe, Trapped in the Web Traffic Jam, Fin. Times, Oct. 16, 1996, at 22.

¹⁵ Maney, supra note 14.

¹⁶ Id.

¹⁷ Lee L. Selwyn & Joseph W. Laszlo, The Effect of Internet Use on the Nation's Telephone Network, (visited on March 17, 1997) <http://www.internetaccess.org/eti_part1.htm>, *prepared for the Internet Access Coalition*, ("IAC Study").

¹⁸ Maney, supra note 14.

2. RBOC Studies Do Not Support PSTN Congestion Claims

As evidence that Internet use is congesting the PSTN and disrupting the reliability of the telephone system, the RBOCs point to several studies they conducted within the past year.¹⁹ These studies from Bell Atlantic, Pacific Bell, and Bellcore, purport to show a telephone system oppressed by the weight of individuals dialing into their ISPs.²⁰

According to the June 28, 1996 Bell Atlantic Report, the average length of all ISP calls studied was 17.7 minutes compared to approximately four to five minutes for other calls on the PSTN. The Report also states that ISP line usage over a four week sample period, at nine central offices selected for the study, was more than double the usage of selected multiple line business/government customers served by those central offices and more than eight times the average line use at those central offices for that period. The Report argues that tremendous increase in traffic caused dial tone delay²¹ to increase from 0.78% to 2.22% at one Virginia central office, a level previously not seen at that office. The Report warns that such growth could “lead to a possible disruption of vital public safety services such as 911 emergency call service.”

¹⁹ IAC Study. See also, e.g. BA Report.

²⁰ A reason cited for this increase in use by Internet users is flat-based pricing by the ISPs themselves. According to Bell Atlantic, this flat rate system has created an incentive for Internet users to remain connected for longer periods of time, even when they are not actively using the Internet.

²¹ The BA Report defines “dial tone delay” as the percentage of customers receiving a delayed dial tone when they pick up the receiver of the telephone.

Bell Atlantic's Report is flawed in a number of ways. As a result, the Report distorts the truth about "congestion" on the Internet. While there has been a notable increase in traffic on the PSTN due to the explosive growth of the Internet, the existing telephone network is handling that growth better than the RBOCs would have the Commission believe.

First, Bell Atlantic's Report used an anecdotal sample of central offices to conduct its research, choosing to focus on only nine central offices and less than 5000 total circuits.²² While the study raises some issues as to congestion and problems at those particular central offices, the study in no way represents a cross section of Bell Atlantic's entire network. Attempts to extrapolate such data are highly suspect, especially since the study focused on central offices in the Washington, D.C. metro area, the East Coast heart of the Internet community, where some of the heaviest concentrations of Internet users and ISPs are found.²³ Additionally, many of the central offices used in the study are located in areas that are growing quickly. These offices are experiencing growth-related problems which are unrelated to their ISP growth or Internet use of the PSTN. At best, these studies have shown that some central offices are encountering problems with serving

²² *Id.* For all of the RBOCs' studies, only 127 out of 23,686 switching entities were studied, hardly a representative sample from which to draw such broad conclusions. IAC Study <http://internetaccess.org/eti_part1.htm>

²³ BA Report. Likewise, the Pacific Bell study focused on the Silicon Valley/Southern Bay area of California, which contains the highest concentration of Internet users in the world.

ISPs in those areas. However, problems at isolated central offices do not represent congestion in the network as a whole.²⁴

Second, the Bell Atlantic Report itself reveals that increased usage of the PSTN attributed to ISPs and Internet users has not created a serious congestion problem. The data shows that the average peak hour for a central office was around 4:00 PM. For business users, the peak occurred around 5:00 PM.²⁵ Social calls peak around 7:00 PM.²⁶ For ISP and Internet traffic, however, the peak time was between 10:00 and 11:00 PM!²⁷ Additionally, analysis of the RBOC's own data shows that the Internet usage peak was lower than the business usage peak.²⁸

Finally, as the January 22, 1997 Internet Access Coalition Study revealed, the Bell Atlantic Report stated that one-half of all ISPs use primary rate interface (PRI) ISDN lines, which connect directly to the central office using trunk port connectivity.²⁹ This arrangement is non-blocking at the terminating switch and does not contribute to

²⁴ Other telcos have not been so quick to raise the congestion flag. Ameritech claims to have a negligible increase in its CCS, but that such a rise is not enough to start expanding capacity as of yet. David Kopf, Crying 'Uncle' or Crying 'Wolf?': Saving the PSTN From Increasing Data Demands, America's Network, Dec. 1, 1996 at 30.

²⁵ BA Report.

²⁶ Mark Rockwell, Study: Data No Threat to Phone Lines, Communications Week, Dec. 16, 1996, at 1.

²⁷ BA Report.

²⁸ Rockwell, supra note 24.

²⁹ IAC Study, at <http://internetaccess.org/eti_part4.htm>.

congestion at the switch in the central office.³⁰ Since Bell Atlantic general estimates of switch congestion on the PSTN do not take ISP use of PRI ISDN lines into account, related Bell Atlantic claims of PSTN congestion due to Internet usage are severely inflated.³¹

H&E believes, while some congestion does exist on the PSTN, that congestion is highly localized and fixable by the market without resorting to any new regulatory scheme. Most of the congestion that does exist, exists on the Internet itself, not the PSTN, and occurs after the data traffic is beyond the switched network.³² To the extent the "problem" of PSTN congestion exists at all, it exists only in the balance sheets of the LECs and their prospective ISP businesses.

B. Technological Advances Will Mean That Future Internet Usage Will Place Less Demands on the PSTN.

New technological solutions to many of the problems of the Internet exist and market forces are driving the development and deployment of these new technologies. For example, in response to heavy data traffic and the inefficiencies of using the switched network to move packet switched data, SBC Communications (formerly Southwestern

³⁰ Id.

³¹ Id.

³² See Maney, Kehoe, supra note 14.

Bell) recently introduced a separate network for data calls.³³ SBC basically split the existing network into two different lanes of traffic; one for voice and one for data. The network looks at each incoming call, determines if it is a voice call or data, then routes data calls onto a high-speed digital lane.³⁴

Other technologies are working their way into the market, in response to the demands of consumers, ISPs, and the telcos. Currently available technologies, such as PRI ISDN and xDSL (digital subscriber lines), can dramatically increase the speed of connections while removing much of the data traffic from the PSTN. ISDN can provide data services up to 128k bps, while xSDL can provide data speeds at a whopping 6M bps. Prices for residential ISDN lines are dropping.³⁵ Recently, Bell Atlantic announced plans to roll out ADSL (asymmetrical digital subscriber lines) services by the end of the year.³⁶ Still other technologies for connecting to the Internet, without the use of the PSTN, are being explored. Currently, technology is being developed that would

³³ Maney, supra note 14.

³⁴ Id.

³⁵ Bell Atlantic announced rate cuts on its ISDN service to between \$28 and \$31 a month. Peter Lambert, Bell Atlantic, 3Com Partner on ISDN Price Cuts, (visited Mar.19, 1997) <<http://www5.zdnet.com/zdnn/content/inwo/0317/inwo0004.html>>

³⁶ Stephanie LaPolla, Bandwidth Boost Ahead, According to Bell Atlantic CEO Ray Smith, PC Week Online, Mar. 18, 1997, available on-line at <<http://www.pcweek.com/news/0317/18ebell.html>>. Prices at test centers are running around \$60 a month for the service. Id. Other companies are also beginning to provide ASDL services. See Geof Wheelwright, Keeping the Faith: Asynchronous Subscriber Digital Lines, Communications International, Jan., 1997, at 53.

enable ISPs to use wireless systems to move massive amounts of data off the land-line and onto wireless services.³⁷

C. Regulating ISPs Would Be Imprudent In These Early Stages of Marketplace Development and Overall Reform of Existing Policies.

H & E believes that a wait-and-see approach to regulatory adjustments under consideration here continues to be the best Commission strategy. Currently, market forces are driving the development of this country's advanced telecommunications system and related technologies. Relying on those market forces, free of any regulated fee structure, is the best way to continue this rapid technological development and address whatever "problems" of congestion exist.

It should also be remembered that the pace of growth and development of the Internet and related businesses is unmatched in any other industry. Indeed, it is easy to forget that the World Wide Web as we know it has only been around for approximately four to five years, barely a hiccup in time for many industries. Software companies have decreased the software development time on certain products down to six months and events that took place only last September seem old and dated today. If the Commission did decide to impose access charges upon ISPs, by the time the rates, structures, and organization of the charges were established, the Internet community could very well have

³⁷ Courtney Macavinta, Look Ma Bell, No Wires, (visited Mar. 19, 1997) <<http://www.news.com/News/Item/0,4,8293,00.html>>.

developed new ways of connecting ISPs to the Internet that no longer involve the PSTN. By that time, access charges would be as useless as a 28.8 modem. Even worse, those regulations, created in response to a problem that no longer exists, could have the result of destroying the natural pace of growth and development of the medium, causing more harm than good.

The Bell Atlantic and other RBOC Reports attempt to dislodge past Commission restraints by suggesting a "knee-jerk" regulatory reaction: the network is losing its integrity; the growth of the Internet is to blame; ISPs aren't paying their fair share . . . so let's switch to a regulatory scheme that results in greater revenue for the RBOCs. Simple and painless for the operators of the PSTN.

Bell Atlantic offers simple math to support that new regulatory approach. Its Report concludes that cost of serving ISPs runs approximately \$30 million a year with revenues from the ISPs accounting for \$8.2 million.³⁸ That leaves a shortfall of approximately \$22 million a year; a cost that Bell Atlantic claims is cross subsidized from other, non-Internet, telephone users.

For all its purported focus on the economics of serving ISPs, the Bell Atlantic Report fails to provide a true and accurate picture, by leaving out significant revenues

³⁸ BA Report.

generated by second telephone lines that are heavily promoted by the RBOCs. Before 1990, when the Web as we know it did not exist, less than 3% of households subscribed to second residential lines.³⁹ By 1995, that number reached 14.7% of households and estimates are that the number will reach 16% or even greater for 1996.⁴⁰ The Internet Access Coalition Study estimated that in 1995, over 6 million of those additional residential lines were used solely, or primarily for on-line use.⁴¹ With that figure in mind, the RBOCs are making an estimated \$1.4 *billion* a year on those additional lines alone.⁴² That revenue dwarfs the \$245 million estimated by the RBOCs as the cost for the serving the ISP market. The Report also fails to note a number of significant revenue sources generated by ISPs such as ISDN usage fees.⁴³ These additional revenues sources invalidate Bell Atlantic's request for relief through the imposition of access charges on ISPs.

The RBOCs would have the Commission throw out decades of nurturing cognizance of the development of the most advanced communications networking efforts in our lifetime due to: (1) PSTN congestion that does not, in fact, exist across the board

³⁹ IAC Study, at <http://internetaccess.org/eti_part3.htm>.

⁴⁰ Id.

⁴¹ Id.

⁴² Id.

⁴³ As noted above, half of all ISPs connect to the central offices with PRI ISDN lines. Often, the RBOC's charge a metered usage fee to use these ISDN lines. See, Courtney Macavinta and Jeff Peline, Pac Bell to Raise ISDN Rates, (visited March 24, 1997) <<http://www.news.com/News/Item/0,4,8611,00.html>> (Pac Bell charges 1 to 3 cents per minute during peak times for using an ISDN line in addition to its regular monthly fee of \$29.50 for residential and \$33.55 for business users).

and (2) an incomplete economic focus. Instead, the Commission should be guided by RBOC marketplace initiatives that belie the cries for help in their Reports.

In announcing the introduction of ADSL technology and the rollout of its switched broadband network (52M-bps service) Ray Smith, Chairman and CEO of Bell Atlantic said:

"Switched broadband, with its range of capabilities, will obsolete everything else. . . As the technology evolves, both Bell Atlantic and its customers must change with the times in order to survive. . . The strategic agility of small and large businesses is the most important aspect going forward."⁴⁴

We could not agree more. Whatever obstacles face the PSTN and the Internet now, marketplace efforts of RBOCs and ISPs alike, offer the best placed solutions for whatever ails this evolving communications system.

IV. CONCLUSION

Internet usage has not caused PSTN-wide congestion, despite arguments to the contrary. Where bottlenecks do exist, in isolated examples on the PSTN and at ISP side

⁴⁴ LaPolla, supra, note 38.

operations, new technologies such as PRI ISDN, xDSL, data-only networks, and wireless communications offer ready solutions.

Any reversal of the Commission's long standing prudent policy of regulatory restraint in this important area of growth in telecommunications technology runs a very real risk of irreparably impairing the development of the very medium the Commission is trying to promote.

Respectfully submitted,

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A handwritten signature in dark ink, appearing to read "Robert E. Jones, III", written over a horizontal line.

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